WHAT IS CLAIMED IS:

1. A herpes simplex virus (HSV)-based amplicon vector carrying a genomic DNA fragment, said amplicon vector comprising:

(a) a large capacity cloning vector,

(b) a herpes virus origin of replication,

(c) a herpes virus cleavage/packaging signal, and

(d) a genomic DNA fragment;

wherein said HSV-based amplicon vector is capable of infecting and delivering said genomic DNA to a target cell.

2. The HSV-based amplicon vector of claim 1, wherein said large capacity cloning vector is a bacterial artificial chromosome (BAC), P1 phage-based vector (PAC), cosmid, yeast artificial chromosome (YAC), mammalian artificial chromosome (MAC), human artificial chromosome, or viral-based vector.

3. The HSV-based amplicon vector of claim 2, wherein said large capacity cloning vector is a bacterial artificial chromosome (BAC) or P1 phage-based vector (PAC).

4. A method of converting a large capacity cloning vehicle containing genomic DNA into a herpes simplex virus (HSV)-based amplicon, such that said HSV-based amplicon can infect and deliver said genomic DNA to a target cell, said method comprising recombining said HSV-based amplicon vector with said large capacity cloning vehicle.

5. The method of claim 4, wherein said HSV-based amplicon is comprised of HSV-1 alone.

6. The method of claim 4, wherein said HSV-based amplicon is comprised of HSV-1 and EBV.

7. The method of claim 4, wherein said large capacity cloning vehicle is a bacterial artificial chromosome (BAC), P1 phage-based vector (PAC), cosmid, yeast artificial chromosome (YAC), mammalian artificial chromosome (MAC), human artificial chromosome, or viral-based vector.

8. The method of claim 7, wherein said large capacity cloning vehicle is a bacterial artificial chromosome (BAC) or P1 phage-based vector (PAC).

9. The method of claim 4, wherein said recombining is accomplished using site-specific recombination.

10. The method of claim 9, wherein said site-specific recombination is loxP/cre recombinase-mediated recombination.

11. The method of claim 4, wherein said recombining is accomplished using homologous recombination.

12. The method of claim 4, wherein said recombining is accomplished using ligation of DNA.

13. The method of claim 4, wherein said genomic DNA is human genomic DNA.

14. The method of claim 4, wherein said genomic DNA is non-human genomic DNA.

15. The method of claim 13, wherein said human genomic DNA contains a gene that encodes a therapeutic protein.

16. The method of claim 13, wherein said human genomic DNA contains a gene that encodes hypoxanthine phophoribosyltransferase (*HPRT*) or low density lipoprotein receptor (*LDLR*).

17. The method of claim 13, wherein said human genomic DNA contains human or mammalian centromeric DNA for the creation of human or mammalian artificial chromosomes.

18. The method of claim 13, wherein said human genomic DNA contains regulatory or controlling DNA sequences.

19. The method of claim 4, wherein said genomic DNA is between 50 to100 kb in size.

20. The method of claim 4, wherein said genomic DNA is between 100 to150 kb in size.

21. A method of constructing a herpes simplex virus (HSV)-based amplicon vector carrying a genomic DNA fragment, said method comprising subcloning a genomic DNA fragment into a cloning vehicle, said cloning vehicle comprising (a) a large capacity cloning vector, (b) a herpes virus origin of replication, and (c) a herpes virus cleavage/packaging signal; such that said HSV-based amplicon vector is capable of infecting and delivering said genomic DNA to a target cell.

22. The method of claim 21, wherein said large capacity cloning vector is a bacterial artificial chromosome (BAC), P1 phage-based vector

(PAC), cosmid, yeast artificial chromosome (YAC), mammalian artificial chromosome (MAC), human artificial chromosome, or viral-based vector.

23. The method of claim 22, wherein said large capacity cloning vector is a bacterial artificial chromosome (BAC) or P1 phage-based vector (PAC).

24. A rapid system for producing viral vectors containing transgenes of interest, wherein said system comprises two site-specific recombination events between: (a) a plasmid comprising a viral genome and a prokaryotic backbone, and (b) a transfer plasmid comprising a transgene of interest, wherein one site-specific recombination event occurs in bacteria, and the other site-specific recombination event occurs in mammalian cells.

25. The system of claim 24, wherein the viral vector is herpes simplex virus.

26. The system of claim 24, wherein the viral vector is adenovirus.

27. An infectious, expression-ready genomic DNA library for use in functional genomics comprising a plurality of vectors, each vector comprising:

(a) a large capacity cloning vector,

(b) a herpes virus origin of replication,

(c) a herpes virus cleavage/packaging signal, and

(d) a genomic DNA fragment;

wherein said vectors are capable of being propagated within bacterial cells and are also capable of being packaged into infectious particles.

28. The infectious, expression-ready genomic DNA library of claim 27, wherein said herpes virus origin of replication is an HSV-1 origin of

replication, and said herpes virus cleavage/packaging signal is an HSV-1 cleavage/packaging signal.

29. The infectious, expression-ready genomic DNA library of claim 27, wherein said large capacity cloning vector is a bacterial artificial chromosome (BAC), P1 phage-based vector (PAC), cosmid, yeast artificial chromosome (YAC), mammalian artificial chromosome (MAC), human artificial chromosome, or viral-based vector.

30. The infectious, expression-ready genomic DNA library of claim 27, wherein said large capacity cloning vector is a bacterial artificial chromosome (BAC).

31. The infectious, expression-ready genomic DNA library of claim 27, wherein said genomic DNA fragment is derived from a human chromosome, a mouse chromosome, or a rat chromosome.

32. A method of isolating a genomic DNA clone encoding a gene product with a preselected function comprising:

(a) obtaining an infectious, expression-ready genomic DNA library comprising a plurality of vectors, each vector comprising:

(i) a large capacity cloning vector,

(ii) a herpes virus origin of replication,

(iii) a herpes virus cleavage/packaging signal, and

(iv) a genomic DNA fragment;

(b) packaging the vectors of said library into infectious particles;

(c) infecting host cells with said infectious particles;

(d) identifying an infected host cell that exhibits a phenotype indicative of said preselected function; and

(e) isolating said genomic DNA fragment of the library vector from said infected host cell identified in step (d).

33. The method of claim 32, further comprising determining the nucleotide sequence of said isolated genomic DNA fragment.

34. The method of claim 32, wherein said large capacity cloning vector is a bacterial artificial chromosome (BAC), P1 phage-based vector (PAC), cosmid, yeast artificial chromosome (YAC), mammalian artificial chromosome (MAC), human artificial chromosome, or viral-based vector.

35. The method of claim 32, wherein said large capacity cloning vector is a bacterial artificial chromosome (BAC).

36. The method of claim 32, wherein said genomic DNA fragment is derived from a human chromosome.

37. The method of claim 32, wherein said host cells are mammalian cells.